



## 2SC5353

### NPN SILICON TRANSISTOR

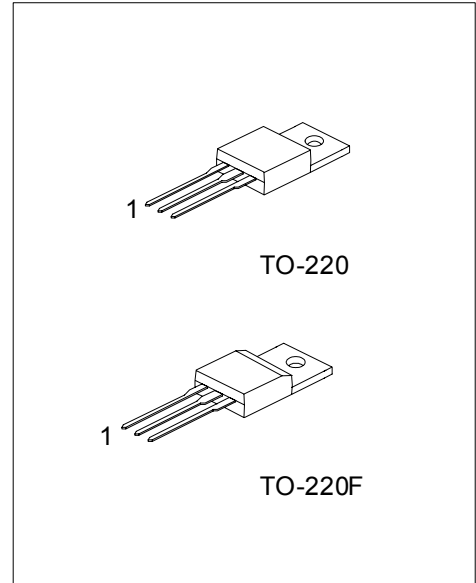
## HIGH VOLTAGE NPN TRANSISTOR

### DESCRIPTION

Switching Regulator and High Voltage Switching Applications  
High-Speed DC-DC Converter Applications

### FEATURES

- \* Excellent switching times:  $t_R = 0.7\mu s_{(MAX)}$ ,  $t_F = 0.5\mu s_{(MAX)}$
- \* High collectors breakdown voltage:  $V_{CEO} = 800 V$



\*Pb-free plating product number: 2SC5353L

### ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SC5353-TA3-T	2SC5353L-TA3-T	TO-220	B	C	E	Tube
2SC5353-TF3-T	2SC5353L-TF3-T	TO-220F	B	C	E	Tube

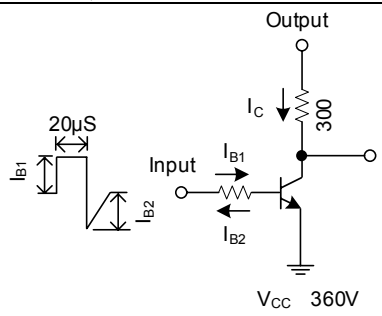
<p>2SC5353L-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Plating</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATING (Tc = 25 )

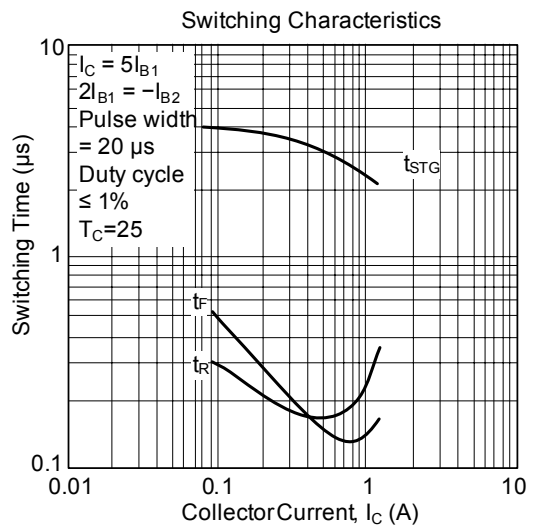
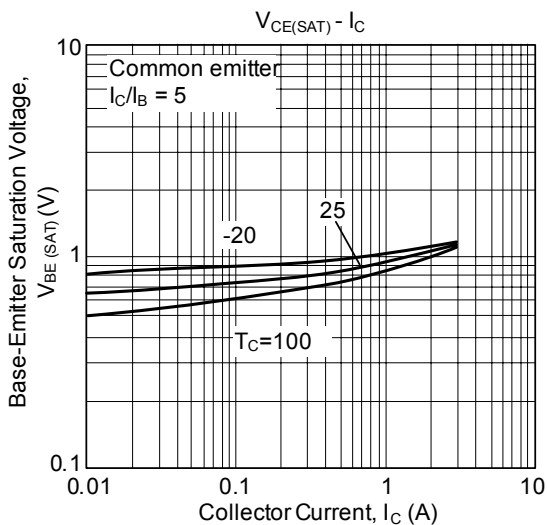
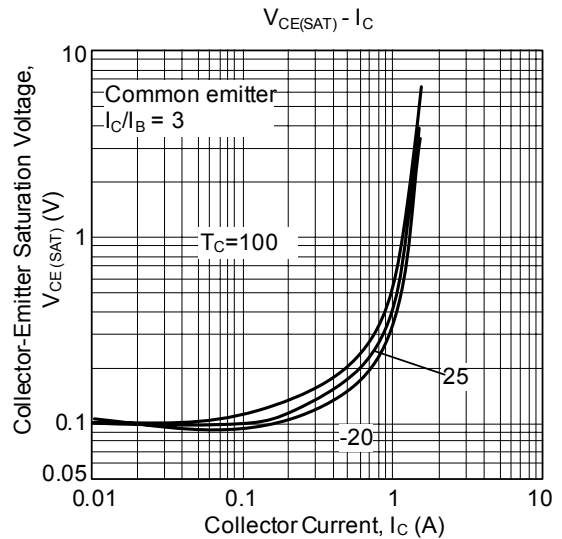
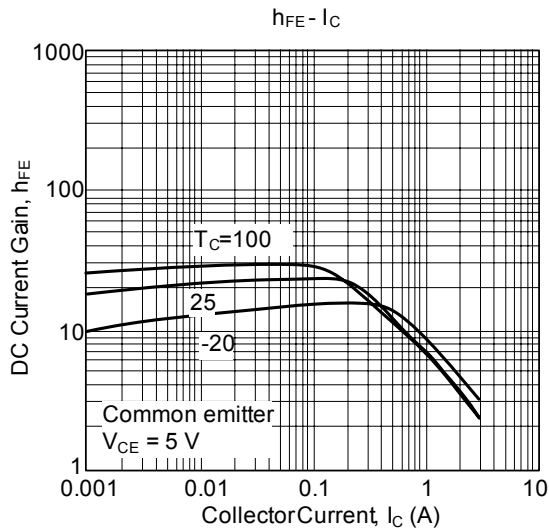
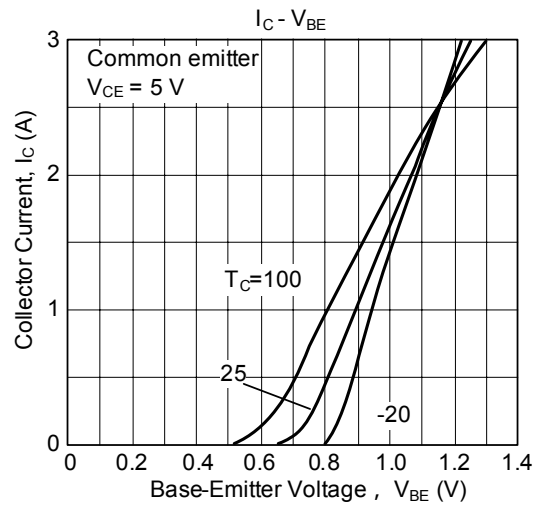
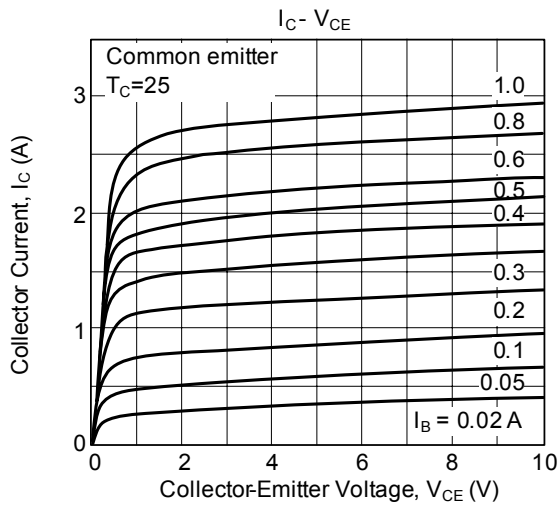
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CBO}$	900	V
Collector-Emitter Voltage		$V_{CEO}$	800	V
Emitter-Base Voltage		$V_{EBO}$	7	V
Collector Current	DC	$I_C$	3	A
	Pulse	$I_{CP}$	5	
Base Current		$I_B$	1	A
Collector Power Dissipation	Ta = 25	$P_D$	2.0	W
	Tc = 25		25	
Junction Temperature		$T_J$	+150	
Storage Temperature		$T_{STG}$	-40 ~ +150	

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

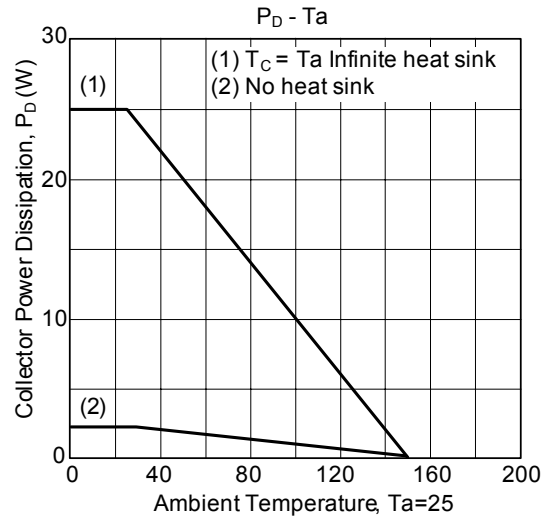
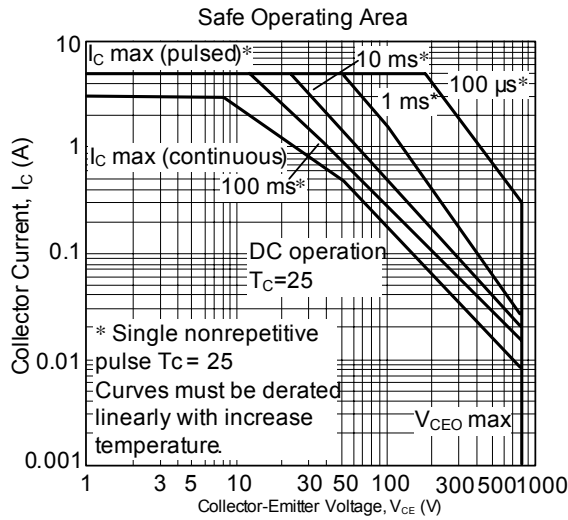
■ ELECTRICAL CHARACTERISTICS (Tc = 25 )

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage		$BV_{CBO}$	$I_C=1\text{ mA}, I_E=0$	900			V
Collector-Emitter Breakdown Voltage		$BV_{CEO}$	$I_C=10\text{ mA}, I_B=0$	800			V
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=720\text{ V}, I_E=0$			100	$\mu\text{A}$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=7\text{ V}, I_C=0$			10	$\mu\text{A}$
DC Current Gain	$h_{FE(1)}$		$V_{CE}=5\text{ V}, I_C=1\text{ mA}$	10			
	$h_{FE(2)}$		$V_{CE}=5\text{ V}, I_C=0.15\text{ A}$	15			
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	$I_C=1.2\text{ A}, I_B=0.45\text{ A}$			1.0	V
Base-Emitter Saturation Voltage		$V_{BE(SAT)}$	$I_C=1.2\text{ A}, I_B=0.24\text{ A}$			1.3	V
Switching time	Rise time	$t_R$	 <p><math>I_{B1} = 0.24\text{ A}, I_{B2} = -0.48\text{ A},</math> duty cycle <math>\leq 1\%</math></p>			0.7	$\mu\text{S}$
	Storage time	$t_{STG}$				4.0	
	Fall time	$t_F$				0.5	

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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